currently engaged in completing the Mid Term Appraisal of the Tenth Five Year Plan. Over the past two months, each of the over twenty five Divisions of the Planning Commission has been deliberating with the relevant nodal Ministry through Quarterly Performance Review and Annual Plan discussions about the financial allocations assigned to any given sector, the utilization of funds and savings, if any, the need to bring about modifications in the existing structures and schemes.

Besides, stakeholders consultations with civil society, demographers and researchers have also been completed.

The Mid Term Appraisal will indicate, where necessary, the need for change in existing structures and schemes. The entire exercise of Mid Term Appraisal would be completed in the week ahead.

The Planning Commission has already taken steps to appropriately upgrade and position the personnel in the Health Division.

Weather forecasting facility in Maharashtra

1547. SHRI BALAVANT *alias* BALAPTE:
SHRI SU. THIRUNAVUKKARASAR:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Government propose to set up 'An advance weather forecasting' facility in Maharashtra;

(b) if so, the details thereof; and

(d) if not, the reasons therefor?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) No, Sir.

(b) In view of (a), does not arise.

(c) The weather forecasting facilities already exist at Mumbai, Pune and Nagpur in Maharashtra, which give weather forecast for next 48 hours along with outlook for subsequent 2 days.

Drugs From Medicinal Plants

1548. SHRI NANDI YELLAIAH: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the details of new drugs and molecules developed so far from important medicinal plants;

(b) the details of uses of such new drugs and molecules for people;

(c) the detials of progress made so far on digitalising Inventory and documentation of our country's Bio-Reserves;

(d) the details of progress made in Genomics Projects under Indo-Israel Co-operation;

(e) whether 52 technologies developed from Bio-Tech Laboratories have been transferred to Industries in the last four years; and

(f) if so, the details of progress made by those industries in their manufacturing process involving those transferred Technologies and their important use to people?

THE MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) Some Central Ministries/ Departments/Agencies are supporting various research programmes towards development of new drugs and molecules from important medicinal plants. These include Council of Scientific and Industrial Research (CSIR); Indian Council of Medical Research (ICMR); Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homeopathy (AYUSH), Defence Research and Development Organization (DRDO), Department of Science & Technology (DST) and Department of Biotechnology (DBT). Under the programmes supported by CSIR, two herbal formulations have developed as hepatoprotective agents. Other developments include Dilex-C (licensed to M/S Unichem Laboratories, Mumbai) which dialates cervix for medical termination of pregnancy; CONSOAP - contraceptive cream (licensed to M/S Hindustan Latex Limited, Thiruvananthapuram); Arteether -antimalarial drug (licensed to M/S Themis Medicare, Mumbai as E-mal); Picroliv - hepatoprotective drug (licensed to M/S Duphar Interfron, Mumbai) and a memory enhancer (licensed to M/S Lumen Marketing Company, Chennai). The ICMR is presently engaged in development of drug from Vijaysar and compounds from Jamun for diabetes. Under a project supported by DST, a novel oligospirostanoside having potential immunomodulatory activity has been developed from Shatavari. Under the projects supported by DBT, various potential therapeutic agents have been developed from important medicinal plants. These include an immunomodulatory agent (berberin) from Daruharida; a novel peptide from Bitter gourd (Karela), having hypoglycemic activity; a phenolic glycoside from Neem bark having

potential activity against hyperacidity and gastric ulceration; anticancer agents from bel, Nirgandi and Lal-bhuin anvalah. Some of these lead agents have been further taken up for converting into drugs. Some Indian Pharma companies have also developed new molecules from Reetha and Satyanasi for migraine and psoriasis, respectively which have been cleared for Phase-I clinical trials.

(c) No systematic and comprehensive efforts have been made so far on digitalising Inventory and documentation of our country;s Bio-Reserves. However, the Department of Biotechnology (DBT) under the auspicies of National Bioresource Development Board (NBDB) has been pursuing work on preparation of digitized inventories of bioresources available in the country including medicinal and other economically important plants, animals, marine and microbial resources based on secondary information. The inventory on plant resources is now ready and contains information on nearly 2200 species. Work on other inventories is nearing completion.

(d) Under the Indo-Israel Cooperation, nine proejcts in genomics have been supported for pharmacogenomics, structural genomics, identification and characterization of noval genes. More than hundred human subejcts have been enrolled for the pharmacogenomics study. Genotyping for some fo the single nucleotide polymorphisms has been carried out. A database has been created to study the structure of proteins selected from the completed genome sequences. Several differentially regulated genes from *Trichoderma virens*, a fungus used as a biocontrol agent, have been identified and differential libraries have been constructed.

(e) and (f) In fact 52 technologies developed from Bio-Tech Laboratories have been transferred to industries and other user agencies so far. Out of these, seventeen have been already commercialized and are available to people for use. These products are in the areas of agriculture, aquaculture, human health, animal productivity and environmental safety.

Medicinal Plants in Jammu and Kashmir

1549. PROF. SAIF-UD-DIN SOZ: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Government are aware of the need to conserve herbs/roots, flowers of medicinal importance in Jammu and Kashmir State; and